

The Examiner is respectfully requested to consider the amendments herein prior to taking up the above-identified application for the first Office Action.

Respectfully submitted,

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By their Representatives,

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Date April 18, 2001

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This paper or fee is being deposited on the date indicated above with the United States Postal Service pursuant to 37 CFR 1.10, and is addressed to The Commissioner for Patents, Box Patent Application, Washington, D.C. 20231.

Clean Version of Page 11, Paragraph 4**DNA ENCODING A DNA REPAIR PROTEIN**

Applicant: John H.J. Petrini et al.

Serial No.: Unknown

jc903 U.S. PRO
09/837602
04/18/01



Figure 6. Structure of the p95 cDNA. (A) The schematic diagram represents the structure of the p95 cDNA. The entire 4,483 basepair (bp) cDNA is represented by the thin line and the rectangular box is the 754 amino acid (aa) open reading frame (ORF) (SEQ ID NO:2). Within the ORF the grey box indicates the N-terminal region showing homology to *S. cerevisiae* Xrs2. The solid line above the ORF indicates the region cloned by two-hybrid screen utilizing hMre11 as bait. (B) N-terminal alignment of p95 (SEQ ID NO:3) with Xrs2 (SEQ ID NO:4). The shaded boxes indicate the regions of similarity. The two proteins show 28% identity and 46% similarity over the region displayed. The following amino acids were considered similar: {D, E, N, Q} {F, W, Y} {I, L, V} {K, R} {A, G} {S, T} {C} {H} {M} {P}. (C) A Zoo-Blot Southern blot (Clontech, Palo Alto, CA) of EcoRI digested DNA from various species was probed with the *NBS1* cDNA. Lane 1, human; lane 2, monkey; lane 3, rat; lane 4, mouse; lane 5, dog; lane 6, cow; lane 7, rabbit; lane 8, chicken; and lane 9, yeast. The position of size markers (in kilobase pairs) is indicated on the left.

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Figure 14. cDNA sequence of p95 (SEQ ID NO:1).

Clean Version of Page 73, Table 1

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Table 1

Peptides Obtained From Mass Spectrometry Analysis

Peptide ^a	Position ^b
-QPPQIESFYPPPLDEPSIGSK-	189-209 (SEQ ID NO:9)
-LSSAVVFGGGEAR-	238-251 (SEQ ID NO: 10)
-WIQSIMDMLQR-	289-299 (SEQ ID NO: 11)
-QGLRPIPEAEIGLAVIFMTTK-	300-320 (SEQ ID NO: 12)
-TTTPGPSLSQGVSVDEK-	335-351 (SEQ ID NO: 13)
-MLSQDADPTVKE-	395-404 (SEQ ID NO: 14)
-TSSNNNSMVSNTLAK-	409-423 (SEQ ID NO: 15)
-IPNYQLSPTKLPSINK-	426-441 (SEQ ID NO: 16)
-NYFQPSTKK-	458465 (SEQ ID NO:17)
-NKEQHLSENEPVDTNSDNNLFTDTDLK-	503-529 (SEQ ID NO:18)
-EMDDVAIEDEVLEQLFK-	552-558 (SEQ ID NO: 19)
-MDIETNDTFSDEAVPESSK-	595-613 (SEQ ID NO:20)
-ELKEDSWAK-	625-635 (SEQ ID NO: 21)
-KLLLTEFR-	653-660 (SEQ ID NO:22)
-NPSSGINDDYQQLK- ^c	671-683 (SEQ ID NO:23)
-EESLADDLFR-	736-745 (SEQ ID NO:24)

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